

SANZ MOLINERO
Appl. No. 10/553,656
Atty. Ref.: 4982-13
April 8, 2008
Amendment

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) Method for ~~modifying plant growth and development~~ increasing plant yield, comprising introducing and expressing an isolated nucleic acid encoding a metallothionein protein ~~a genetic modification~~ in said plant and selecting for increased modulated expression in said plant of a nucleic acid compared to plants of the same species lacking said genetic modification as an indication of a plant with increased yield encoding a metallothionein protein, provided that said modified growth and development is not increased metal accumulation or increased tolerance or resistance to abiotic stress

wherein said nucleic acid is selected from the group consisting of

(i) the nucleic acid sequence of SEQ ID NO: 1;

(ii) a nucleic acid sequence encoding protein of SEQ ID NO:2; and

(iii) a nucleic acid sequence encoding a metallothionein protein which is at least 95% identical to SEQ ID NO: 2.

2. (Currently Amended) Method according to claim 1, wherein said modified plant growth and development is increased yield comprises, preferably an increase of biomass and/or seed yield, when compared to plants of the same species lacking said genetic modification corresponding wild-type plants.

3. (Currently Amended) Method according to claim 2, wherein said increased seed yield comprises increased total number of seeds and/or increased total weight of

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seeds, when compared to plants of the same species lacking said genetic modification or corresponding wild-type plants

4. (Currently Amended) Method according to Claim [[1]]2, wherein said increased yield comprises an increase in biomass modulated expression is increased expression.

5. (Currently Amended) Method according to Claim [[1]]2, wherein said increased yield comprises an increase in seed yield genetic modification comprises introducing an isolated nucleic acid encoding a metallothionein protein into a plant.

6. (Previously Presented) Method according to Claim 1, wherein said nucleic acid encoding a metallothionein protein encodes a type 2 metallothionein.

7. (Currently Amended) Method according to claim 6, wherein said nucleic acid is derived from a plant, preferably from a dicotyledonous plant, more preferably from the family Brassicaceae, most preferably the nucleic acid sequence is from Arabidopsis thaliana.

Claim 8. (Canceled)

9. (Currently Amended) Method according to any one of Claims 1 or 5 to 7, wherein expression of said nucleic acid encoding a metallothionein is driven by a constitutive promoter, preferably the rice GOS2 promoter.

10. (Previously Presented) Plants obtainable by a method according to Claim 1.

Claims 11-24. (Canceled)

25. (new) Method for increasing plant yield, comprising introducing and expressing an isolated nucleic acid encoding a metallothionein protein in said plant and

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selecting for increased plant yield compared to plants of the same species lacking said genetic modification.

26. (new) Method according to claim 25, wherein said increased yield comprises an increase of biomass and/or seed yield, when compared to plants of the same species lacking said genetic modification.

27. (new) Method according to claim 26, wherein said increased yield comprises increased total number of seeds and/or increased total weight of seeds, when compared to plants of the same species lacking said genetic modification

28. (new) Method according to Claim 26, wherein said increased yield comprises an increase in biomass.

29. (new) Method according to Claim 26, wherein said increased yield comprises an increase in seed yield.

30. (new) Method according to Claim 25, wherein said nucleic acid encoding a metallothionein protein encodes a type 2 metallothionein.

31. (new) Method according to claim 30, wherein said nucleic acid is derived from a plant.

32. (new) Method according to Claim 25, wherein said nucleic acid is selected from the group consisting of

- (i) the nucleic acid sequence of SEQ ID NO: 1;
- (ii) a nucleic acid sequence encoding protein of SEQ ID NO:2; and
- (iii) a nucleic acid sequence encoding a metallothionein protein which is at least 95% identical to SEQ ID NO: 2.

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33. (new) Method according to any one of Claims 29 to 32, wherein expression of said nucleic acid encoding a metallothionein is driven by a constitutive promoter.

34. (new) Plants obtainable by a method according to Claim 25.